

Operations with Functions Worksheet

NAME _____

For Problems 1–4, use $f(x) = 2x^2 - 5$ and $g(x) = x^2 - 3x + 1$ to find the indicated values.

1. $(f + g)(1)$
2. $(f - g)(-2)$
3. $(f \cdot g)(4)$
4. $(f \div g)(1.5)$

For Problems 5–8, use the functions $f(x) = \frac{x+1}{x-3}$, $g(x) = \frac{x+2}{x+3}$ to find and simplify:

5. $(f + g)(x)$
6. $(f - g)(x)$
7. $(f \cdot g)(x)$
8. $(f \div g)(x)$

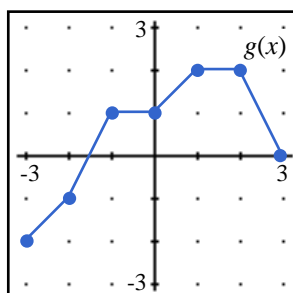
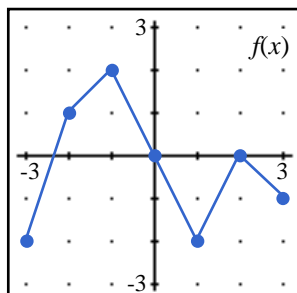
For Problem 9, use the table definitions of $H(t)$ and $r(t)$ shown below to find the indicated operation.

t	1.0	1.5	2.0	2.5	3.0	3.5
$H(t)$	4.8	2.6	0.9	-0.2	-1.4	-3.3

t	1.0	1.5	2.0	2.5	3.0	3.5
$r(t)$	1.2	-2.5	-5.0	-3.8	0.5	7.4

9. (a) $(r + H)(2.5)$
- (b) $(r + H)(1.0)$
- (c) $(r - H)(2.0)$
- (d) $(H - r)(3.0)$
- (e) $(r \cdot H)(1.5)$
- (f) $(r \cdot H)(3.5)$
- (g) $(r \div H)(1.0)$
- (h) $(r \div H)(2.5)$

Problem 10 refers to the graphs of $f(x)$ and $g(x)$ shown.



10. Find the indicated value.
- (a) $(f + g)(1)$
- (b) $(f - g)(-1)$
- (c) $(f \cdot g)(2)$
- (d) $(f \div g)(-3)$